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THE Unexplained

MYSTERIES OF MIND SPACE & TIME

155

The case for God
Faces from another world?
Krakatoa: a true story?
Twilight of the gods
Left and right brain

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THE Unexplained
MYSTERIES OF MIND SPACE & TIME

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Contents

Existence of God
THE CASE FOR GOD 3081
Is there really a creative intelligence guiding the Universe? A controversial scientist argues that there is
Rupert Sheldrake

Ancient gods
TWILIGHT OF THE GODS 3086
We examine the basis of the extraordinary power that the ancient gods exerted over their worshippers
Peter James

Left and right brain
IN TWO MINDS 3090
Recent research suggests the right side of the brain may control intuition – and psychic abilities
Brian Baxter

Dreams
THE SCOOP THAT NEVER WAS 3095
A 19th-century journalist received advance knowledge of the Krakatoa catastrophe in a dream. Or did he?
Melvin Harris

Poltergeists
FACES FROM ANOTHER WORLD? 3098
Even parapsychologists were at a loss to explain the faces 'painted' on a Spanish floor in the 1970s
Elmar Gruber

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The case for God

The debate over the existence of God has raged for centuries; RUPERT SHELDRAKE surveys the arguments of the theologians and the atheists – and asks whether a belief in the existence of God is really at odds with a scientific view of the world

ATHEISTS DENY THE EXISTENCE of God. However, this does not mean they have no faith. For, as much as anyone else's, their philosophy implies a belief in an invisible reality underlying the world we experience with our senses. But for them – in contrast to theists – the ultimate organising principles are thought of as blind, impersonal and unconscious. They are generally considered to be changeless and eternal, to apply everywhere throughout the Universe: nothing can escape them or lie beyond their scope. Moreover, although they influence and control matter, they are not themselves material. They cannot be crystallised in a test tube. The mathematical formulae in terms of which they can be expressed are not carved on the planets, or traced out by rays of light. They elude the senses: the laws of nature cannot be seen, touched, tasted, smelled or heard. They can be known only indirectly, through their effects. Moreover, the most fundamental laws of nature cannot themselves be explained scientifically; they simply have to be accepted as given.

Thus the atheist theory has it that the Universe and all that lies within it depends on eternal, omnipresent, omnipotent and invisible principles. But how does this theory compare with the idea that the Universe depends on God, who is eternal, omnipresent, omnipotent and invisible?

Perhaps the chief difference is that, for the atheist, the universal laws are blind, unconscious and uncreative; they cannot entirely account for creativity in human life or in the evolutionary process, and all creativity is therefore ascribed to change. The Universe is seen as fundamentally inanimate, devoid of soul or spirit – or, in other words, *dead*. By contrast, for the believer in God, the ultimate reality is conscious, creative and *alive*. The laws of nature share some of the properties of God, because God is the source of these laws.

Atheists usually maintain that their view is simpler and more scientific than the theist view; they regard God as an unnecessary hypothesis. Although, at first sight, this theory has a certain plausibility, on further reflection it turns out to raise more difficulties than it solves. First, if matter is regarded as inanimate, governed only by blind laws and chance, there is no place in the system for consciousness. Even the consciousness of the atheist himself has to be regarded as nothing other than a kind of shadow of electrical and chemical changes inside his brain; this shadowy consciousness cannot actually do anything, or influence his actions – these are entirely determined by a combination of the laws of physics and chemistry and random events, over which he has no control (see page 2474). This view is so much at variance with our experience of ourselves as creatures that can exercise free choice that to take it seriously requires a deep faith in the atheist philosophy.

Second, the atheist view holds that both the evolutionary process and the Universe as a whole are without purpose or meaning. Again, only the most committed atheist seems to be able to take this gloomy view seriously, since it can only render his own life

The sower of the systems, by George Frederic Watts (1817–1904). Theists believe that the Universe was created, and is sustained, by an eternal, omnipresent, omnipotent and invisible God. Atheists, however, believe that the Universe was formed by accident and is sustained through the action of eternal, omnipresent, omnipotent and invisible principles – the laws of nature. How different are these two apparently opposing views?

and theories quite pointless.

Third, there is the problem of the nature of the laws of nature – the laws on which so-called scientific atheism depends. What are these laws? As we have seen, they are supposedly universal, changeless and omnipresent, as well as being immaterial. In fact, they sound more like cosmic ideas than material things. And they can be known only as ideas, through scientific theories and mathematical formulae. In the final analysis, it is through these laws that the atheist has to try to account for human consciousness. And this is a difficult task.

These are some of the problems raised by the atheist philosophy. Although the laws of nature play such an important part in it, this theory is not itself scientific. It can never be proved. It can be accepted only by an act of faith.

These particular difficulties do not arise if we suppose instead that the Universe arises from the creative activity of what we might call God. For if God is the conscious source of the Universe, and also contains the Universe, the laws of nature could be seen as rather like ideas in the mind of God. Moreover, this theory suggests that consciousness is present within the Universe – thus making it possible for consciousness to be transferred to living beings arising in the course of the evolutionary process. Indeed, one purpose of this process could be seen as the emergence of consciousness within the created world, and the development of this consciousness to the point at which it can recognise itself and participate in its divine source. Proponents of this theory believe that this point is reached in Man.

If this view is correct, then the consciousness that dwells in Man is the same as the consciousness of God – and it should be possible to experience directly that this is so. Mystics in all religious traditions have testified that this is indeed the case – though sceptics might argue, with some justification, that all mystic experience could be an illusion. The direct insight of mystics has, however, been intuitively recognised as one of ultimate reality, far surpassing ordinary everyday experience. For this reason it cannot be adequately described to those of us who have not experienced it, just as colours cannot be adequately described to someone blind from birth. This direct revelation or enlightenment lies at the heart of all religions; it is this vision of the prophets, seers,

Above: God creates the Sun and stars, in a detail from a 16th-century French stained glass window. Both Eastern and Western religious traditions portray God creating the world through the power of his Word

Above left: *The ancient of days*, by William Blake (1757–1827), shows the creation of the world with a pair of dividers – the tools of the engineer

Far left: the vision of the Roman emperor Constantine, in a Cypriot mural painting of the 15th century. The power of mystic experience has long been recognised – but it does not constitute a *proof* of the existence of God

enlightened ones, sages and saints that connects religious traditions with their divine source. Thus the existence of God is more than a philosophical theory; it is supported – although, of course, not *proved* – by the deepest experience of men and women throughout the ages.

If the consciousness of God gives rise to and sustains the Universe, this consciousness is clearly inconceivably greater than the consciousness of men and women. For this reason, we cannot expect to form any adequate idea of God's nature in terms of our inevitably limited ideas and experience. The best we can do is to use analogies. These vary in the different traditions – but all seem to express a basically similar concept.

One of the best-known images in the Judaic tradition is that of God as a craftsman, like a potter making a pot. An 18th-century version of this analogy likened God to a celestial engineer who designed, made and maintains the Universe as if it were a gigantic clockwork mechanism. Some modern versions see God as a kind of cosmic computer programmer. One of the problems with these approaches is that they treat matter as existing separately from the consciousness of the designer and maker; they suggest a picture of God imposing his will on an inanimate Universe that exists outside him.

In the Indian tradition, a very different analogy is based on our experience of dreaming. The Universe is seen as a vast dream of God. Everything around us, and we ourselves, exists only within the dream of Vishnu, the preserver and protector of the world in the Hindu pantheon. When we have dreams, we are merely experiencing dreams within a dream. Thus the material world has no independent existence separate from the mind of God; matter is not dead and inanimate, but rather a kind of image in the divine mind. If God stops dreaming it, then it will simply vanish. This way of thinking emphasises that nothing is separate from the being of God, and that God is in all things. This provides a valuable and different perspective from the view of God predominant in the Judaic tradition. But one possible disadvantage is that it can lead to a view of the physical world as essentially illusory.

Word power

A third analogy, found in both Western and Eastern traditions, is based on human speech. By uttering words, we enable what comes into our minds to take on a physical existence, as sound, and at the same time to bring about specific effects upon the external world. Some of the most striking examples are provided by the words of command spoken by political rulers, which can cause armies to go to war, or cities to be built, or prisoners to be freed. On this analogy, divine creation is seen as happening through speech: God utters words that automatically

A measure of life

It is often argued that it is impossible to explain consciousness in terms of the laws of nature, since these laws can be known only through consciousness in the first place.

At first blush this argument seems plausible enough. But a simple analogy demonstrates that it is false. Consider the petrol gauge of a car. It indicates how much petrol there is in the tank – but it is fuelled, indirectly, by petrol, and therefore functions only by the virtue of the fact that there is petrol in the tank in the first place. According to the argument about consciousness and the laws of nature, it should be impossible to gain any information about the amount of petrol in the tank of your car by looking at the petrol gauge – which is patently absurd.

have specific effects. Thus, for example, we read in the first chapter of the book of Genesis 'And God said, Let there be light: and there was light.' God is also seen as the supreme judge and law-giver. His 'words' give rise, on the one hand, to the laws of nature, and on the other, to the moral laws in accordance with which human life should be led. These laws are communicated to Man through divinely inspired prophets and seers and, for Christians, supremely in the 'Word made flesh', Jesus Christ.

Although this idea of God creating through the power of his speech can easily degenerate into a picture of a remote and mighty emperor sitting on a throne, it has another important implication that can modify this image. If God speaks to Man, then perhaps Man may also speak to God; and indeed, the addressing of God through invocations and prayers plays an important part in most religious traditions.

Freedom and independence

An analogy that emphasises this aspect of communication more strongly, while at the same time avoiding the impression of distance and remoteness created by the image of the all-powerful autocrat, is that of a loving father. The son's being and consciousness are derived from the father, but at the same time the son has a freedom and independence that would not be possible in a lifeless machine made by an engineer. The strength of this analogy is that it emphasises the possibility of a relationship founded on love between Man and God. Its weakness is that it can easily give rise to misleading images, such as that of a stern, bearded patriarch, or become associated with negative emotional responses in people whose relationships with their all-too-human father have been less than happy.

Many other more poetic analogies have been developed. In India, one of them is based on the play of a child: God's relationship to the Universe is one of play, or *līla*. In

The God within

However convincing religious or mystic visions may be to the person who experiences them, they can never constitute proof of the existence of God. Religion, it seems, will always be a matter of faith rather than of knowledge – for the arguments for and against the existence of God are equally weighted, and it can always be argued that religious experience could be illusory.

The Hebrew language, in a curious way, seems to acknowledge this possibility. For the Hebrew word for the verb 'to pray' is *hitpalel* – a reflexive verb, literally 'to judge oneself'. There is no reference to an external god; the word seems to imply that prayer takes place within the mind of one human being.

Left: a stone relief of the Hindu god Shiva dancing. His cosmic dance is seen as creating the ceaseless activity and changing patterns of the Universe

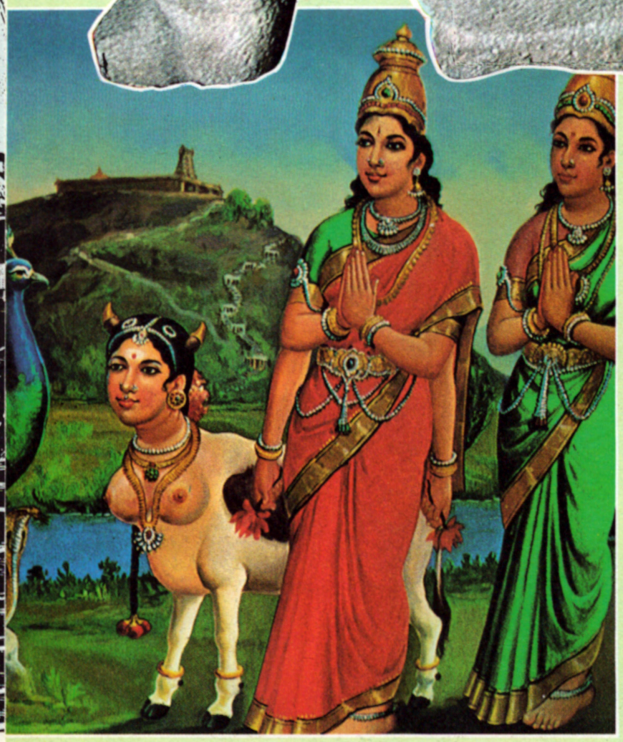
Right: the Mexican god Chac-Mool, the 'divine messenger' who is believed to have carried to the Sun the offering of human sacrifice. Sacrifices are placed on the tray the god carries in his hands – and, when they vanish, the god is believed to have taken them away to offer to the Sun

Bottom: the gods of the Hindu pantheon in a family group that makes them seem more familiar than exalted

another Indian image, God is seen as a dancer, Shiva in the form of Nataraja, whose cosmic dance creates the activity and the changing patterns of the Universe.

In spite of their many differences, the varied images of God – as craftsman, dreamer, ruler, father, playing child and dancer – have in common the idea of creative conscious activity. But none can possibly give an adequate conception of God, and in all religious traditions it is emphasised that God lies beyond all our powers of imagination and comprehension. For instance, among the Jews the making of images or idols of God is prohibited – because God can never be adequately represented by any man-made object; the same prohibition is maintained in Islam. In the Hindu tradition, God's ultimate nature is said to be unknowable: 'not this, not that'. In Taoism, it is said that the 'Tao that can be expressed is not the everlasting Tao. The name that can be named is not the everlasting Name.'

In Buddhism, the absolute is spoken of in terms of what it is not. And in Christian theology, the being of God is recognised as beyond all human conception, the ultimate mystery. Similarly, in Judaism, the true name of God, Yahweh, is regarded as too sacred to be spoken, and is replaced instead by Adonai, meaning 'my lord', when the letters representing 'Yahweh' are read aloud in religious ceremonies.



What belief in the existence of God implies is not an adherence to any particular concept or image of God. It implies, instead, a recognition that the ultimate source of all things is supremely conscious, creative and alive. The atheist, by contrast, believes that the invisible organising principles underlying the Universe are essentially unconscious, blind and purposeless. Neither of these beliefs can be proved by the limited methods of science; and we cannot rely on the powers of logic. In choosing between them, we have to rely on our own experience and on our deepest intuitions. If we accept the philosophy of atheism, we may congratulate ourselves on the extent of our intellectual understanding and think that the hypothesis of the existence of God can be dispensed with. But if we come to recognise that God exists, then we will begin to contemplate the unfathomable mystery of life and of creation.

Twilight of the gods

Today we see no signs of the gods and goddesses who crowded the ancient world. How could they be so real to our ancestors and so unreal to us? PETER JAMES suggests that in the past people perceived the world differently

IN THE MINDS of most of our pre-Christian ancestors the whole of nature seemed to be suffused with divine spirit – crowded with gods who controlled every aspect of the world, from the Sun, Moon and stars to the mountains, winds and rivers. In the ancient Near East the enormous family of gods was also thought to control Man's life intimately, from day to day. In ancient Sumer (the southern part of what is now Iraq), which was one of the earliest urban cultures, whose origins date back to 5000 BC, if not earlier, the gods were seriously believed to be the owners of cities. Man, it was said, had been created solely to relieve the gods from the tedium of work, providing a slave force to carry out the chores of irrigation, agriculture and building.

The temples built by the Sumerians were believed to be literally the homes of their gods. The temple housed the image of the local god or goddess and was a focal point of the city's economy. A considerable proportion of the country's produce – grain, dates, meat and beer – would be brought to the temple for the deity's consumption. The priests were like valets to a divine aristocrat, responsible for clothing, washing, repairing and 'feeding' the god idols, which in turn issued commands for the running of state business, appointed kings as their deputies, and were ceremonially transported when necessary to meet the gods of other cities for high-level discussions.

It is tempting to dismiss the theocracy (rule of the gods) of the ancient Near East as a system of manipulation by the priests, exploiting an incredible gullibility on the part of the Sumerian people. Karl Marx stated that religion was 'the opium of the masses' – that, for example, the Christian promise of eternal bliss in return for a life of poverty and servitude meekly borne was a ploy whose function was to maintain the control of the privileged over the populace. The same explanation does not really work for the ancient Babylonians. In their thought the afterlife was a shadow existence in a bleak underworld – whatever one's moral record in life. There is no possibility that the priests were pulling an elaborate confidence trick – 'suffer now and you will have your reward in heaven.'

Nor were the Babylonians unique in structuring the whole of life, including political and economic life, around their gods.

Achilles, greatest warrior among the Greek besiegers of Troy, slays Hector, son of King Priam and foremost of the city's defenders. He is guided to his foe by the goddess Athena, who hovers overhead. The guidance and advice of the gods is an ever-present reality for the characters of Homeric poetry; were they equally real for the ordinary human beings of Homer's times?

The ancient Egyptians, Phoenicians and Greeks had comparable arrangements with the divine. Large proportions of the gross national products of these civilisations were spent on the housing and daily needs of their gods. Witness the pyramids, each of which was destined to be the tomb of the king who built it – the king being, of course, a living god. Witness the Parthenon and the other costly temples of the acropolis at Athens, and the other magnificent buildings of the ancient Mediterranean world. The ancient peoples who created these structures believed firmly in the reality of their gods and backed their beliefs with lavish gifts.

Left: many today would insist that religious belief has never been anything but a more or less conscious deception that serves to maintain the power of a priestly class. The prophet Daniel, who exposed two false Babylonian deities, would have agreed.The Babylonians brought '12 bushels of fine flour, 40 sheep and 50 gallons of wine' to the idol of the god Bel each day. These vanished overnight. When King Cyrus cited this as proof of Bel's divinity, Daniel laid a trap by scattering ashes secretly on the temple floor. In the morning the footprints of the priests were visible, showing that they were the ones who had been enjoying the food and wine. A dragon was also worshipped by the Babylonians: Daniel exposed its non-divinity by feeding it with pitch, fat and hair, whereupon it died

And, as we have seen, the ancient civilisations worshipped almost identical pantheons of deities under different names (see page 3061). Bel (also known as Marduk) shared many of the characteristics of Zeus and Jehovah. All were sky gods, conquerors of earlier, primeval deities, masters of such natural forces as lightning, and associated with the planet Jupiter.

Twinned oracles

There was a general awareness throughout the ancient Mediterranean of the common heritage of their religions. The oracle of Zeus at Dodona in northern Greece and the oracle of the Egyptian god Amun in the Libyan desert performed identical functions as the mouthpieces of closely similar deities. As we can glean from the writings of Herodotus, the Greek traveller and historian of the fifth century BC, the two oracle centres kept in touch by pigeon post (though the 'pigeons' were actually doves). The priests there agreed that the oracles had a common origin, although they differed in their stories of how this had come about.

Some of these similarities can be explained simply by cultural diffusion. But such arguments leave several unanswered questions. They might explain similarities in form (common symbols, oracle cults, temple procedures), but they leave the basic driving force behind ancient polytheistic religions a mystery.

And how do we account for the similarity between the pantheons of the ancient Mediterranean world and those of pre-Columbian America? The hierarchy of the New World gods provided the focal point for the economic and social structure of the state, just as in the Old World. Human sacrifice, regularly performed on the Aztec pyramids of Mexico, expressed a concern to appease the gods even more compulsive than that of ancient Sumer.

The ancient Meso-American cults, like those of the Near East and Greece, seemed to be dominated by the worship of planetary gods. The major Aztec deity, Quetzlcoatl, resembles Dionysus and Shiva (and Jesus) as a heroic god whose own death and resurrection gave the promise of renewed life to his followers. But the closest parallels to him are to be found in Ishtar, the Babylonian equivalent of Aphrodite. Ishtar and Quetzalcoatl were both warrior deities worshipped as the dragon and the planet Venus. Babylonian and Mexican myths tell similar stories about their 'deaths', how they spent a period in the underworld and about how they were subsequently resurrected to return to the sky as the morning star. The simplest explanation of the parallels between Ishtar and Quetzalcoatl is not that an original myth diffused from one part of the world to the other – especially since the deities differ in sex – but that they were independently originated, and were based on observations of the planet Venus. For long periods Venus is invisible, as if it has 'gone to the underworld'.

Above: a tablet from the Sumerian city of Lagash, recording the building of a temple about 2550 BC. The prince is shown carrying a basket of stones – symbolising the earnestness with which Sumerians high and low served their gods

A more sinister aspect of the planets was emphasised by the rebel scholar Immanuel Velikovsky (see page 1181). Velikovsky's

Left: human sacrifice among the Aztecs. This picture comes from a 16th-century account of the American Indians. The still-beating heart is seen, newly torn from the victim. The sacrifice may have been made to Huitzilopochtli, who by the time that the Spanish arrived in America was a terrible god of war, demanding huge numbers of human victims. In the New World, tribute to the gods took a particularly bloody form

case for the occurrence of global catastrophes within the last few thousand years is based on the world-wide concordance of ancient myth. Legends around the globe tell the same story of portents in the sky and the appearance of a monstrous comet-like body, followed by destructive rains of stones and fire, with cataclysmic earthquakes and tidal waves. As Velikovsky stresses: 'The stories are told very differently in different parts of the world, but the theme is always the same.' The core of the world's mythologies, he points out, is 'theomachy', the war of the gods.

The gods in question, Velikovsky argued, were actually the planets, which had been in turmoil in historical times. Jupiter had been disrupted by a gigantic explosion and had ejected a huge 'comet'. Wandering too close to the Earth, this body had caused the parting of the Red Sea, the plagues of Egypt and later the collapse of Jericho. This object in due course settled down to become the planet Venus.

This could certainly explain why Jupiter and Venus, and their Greek equivalents Zeus and Aphrodite, held far more prominent positions in ancient pantheons than even the Sun and Moon gods – even though the corresponding celestial bodies are mere pin-pricks of light in the sky.

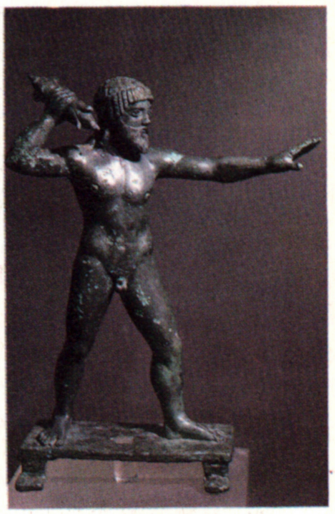
The British astronomers Victor Clube and Bill Napier have argued that Velikovsky's theories of planetary misbehaviour are dynamically impossible. But they accept the validity of his case for the occurrence of catastrophes and claim that comets were responsible for them. Whatever the truth is, it seems we should accept that real dangers from the sky were behind the awe in which the planetary gods were held by all the ancient peoples.

So we are left with several theories, all purporting to explain the origins and resemblances of the world's ancient pantheons: cultural diffusion of some original religion dating from the very earliest times; the worship of the planets and fears of cosmic catastrophes caused by heavenly bodies; and worship of natural forces may have played its part. Other factors that must be taken into account are the various 'spectral' phenomena, ranging from UFOs to encounters with fairy folk – phenomena that exist in the never-never land between material existence and the purely psychological realm. In many ways it is tempting to see the Greek gods, for example, as inexplicable intelligent forces that once operated in the ancient world like a race of poltergeists – rather more intelligent ones than those we know of today.

A god-making mechanism

But it is not very satisfying to explain the origins and resemblances of religions in terms of paranormal factors that are themselves mysterious. Is there any possible unifying explanation in terms of something that is at least partly understood? Do we know of a mechanism that could convert different kinds of 'input' – memories of outstanding human leaders, natural forces – and turn them into 'gods'?

Such a mechanism has been suggested by the American psychologist Julian Jaynes. He provided a neat explanation of the ancient mind's working in terms of modern knowledge of the brain. It is well-known that the right and left hemispheres of the brain control different aspects of human behaviour. One – usually the left – deals with language, mathematics and analytical functions. The



Above: Zeus, brandishing a thunderbolt. According to a traditional view of the origins of the gods, they are personifications of the natural phenomena most significant to human beings: the wind, the rain, streams, the sea, thunder and lightning. But this theory offers no explanation of why human characteristics should be attributed to such things, or how people could believe themselves to hold 'conversations' with them

other is responsible for spatial abilities and is somewhat more involved in emotional responses than the other hemisphere. It has been claimed that intuitive and artistic activity is handled by this hemisphere (usually the right). In schizophrenics and in some epileptics there is a discernible lack of co-operation between the two sides of the brain. In the schizophrenic the left side of the brain can be a source of 'messages' that, after processing by the right-hand side of the brain, are interpreted as the voices of other people or take the form of vivid visual hallucinations.

Examining the religious and epic literature of the ancients, Jaynes was struck by the similarity between the thought processes of our ancestors and that of modern schizophrenics. In the *Iliad*, Homer's famous poem about the Trojan War, the heroes are never seen to make a decision for themselves. They never sit down and ponder a problem: rather, the answer is always described as coming directly from a god. Even in the heat of battle Achilles might be interrupted by an appearance of the war goddess Athena, telling him

Today religious people seek divine inspiration in a 'still small voice within'. The ancients, however, regularly heard the gods as strong clear voices from without – for example, from such oracles as the one at Dodona, in Greece (below). In the Old Testament, communication with God is often highly direct: Abraham, for example, lived in accordance with a stream of detailed divine commands (below right). A different form of divine communication is 'speaking in tongues', as the disciples did at Pentecost (right). The inspired utterances are, as it were, 'relayed' through the human speakers

to make for a particular foe. Is this a straightforward description of the behaviour of the people of that age – behaviour that we regard variously as schizophrenic or inspired?

Jaynes's theory can be applied to a wide range of phenomena: to the voices heard by ancient prophets, the 'muses' that inspired the poets, the commands that issued from graven images. All these can be seen as the products of minds that operated in a schizophrenic manner – or, as Jaynes calls it, a 'bicameral' (two-chambered) manner, alluding to the two halves, or chambers, of the brain. Jaynes believes this bicameral aspect of the human mind began to fade at some time between 1500 and 700 BC, perhaps as the result of natural catastrophes. Only after that time did consciousness as we know it evolve.

The idols might have been constructed as 'focal points' to enhance the bicameral activity of the devotees' minds. In this light we can understand why the ancients made and pampered their idols and we do not need to assume they were gullible or stupid.

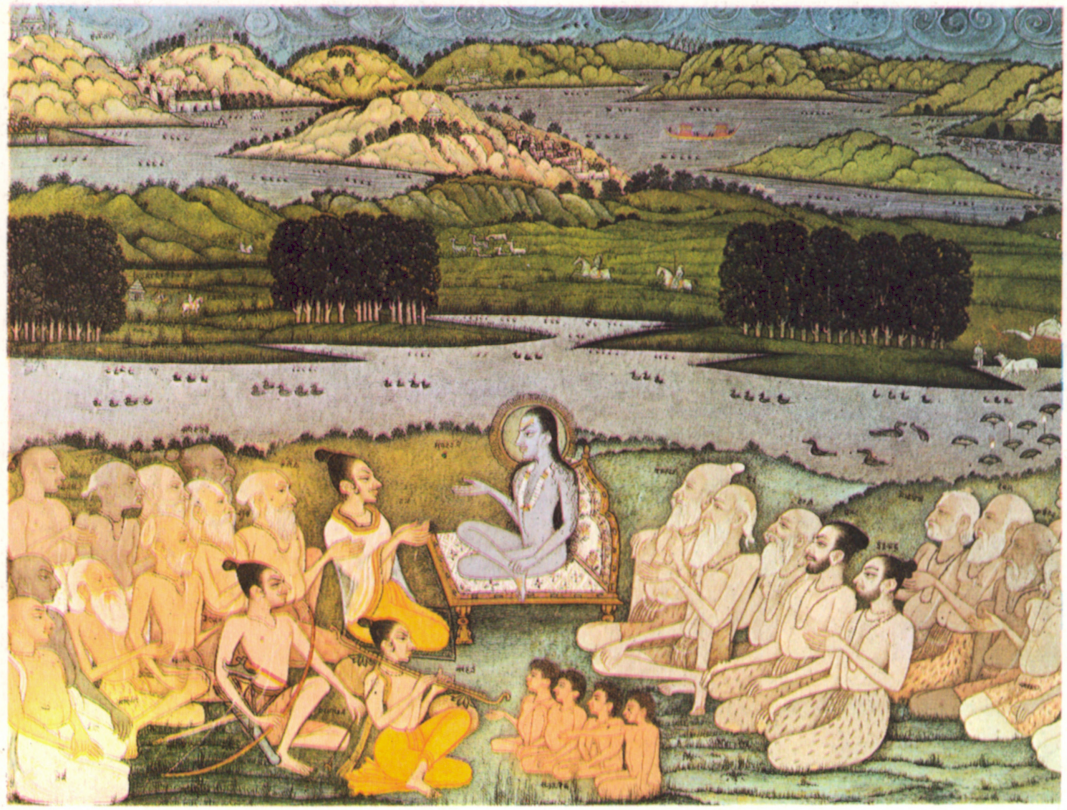
Jaynes's theory also explains why the ancient gods were so 'human' in their behaviour. And we can begin to see why the 'gods' maintained their hold on the minds of the Sumerians, Babylonians, Egyptians, Aztecs and Greeks for so many thousands of years – for as long, in fact, as our somewhat schizophrenic ancestors continued to hear their 'voices'. Today's bicameral phenomena – religious ecstasy, speaking in tongues, prophecy, spirit possession – can be seen as the swansong of the gods, flickers of 'divine' activity in a human psyche fundamentally changed from that of our polytheistic ancestors of three millennia ago.

Further reading

Alain Daniélou, *Shiva and Dionysus*, East-West Publications 1982

Julian Jaynes, *The origin of consciousness*, Allen Lane 1979

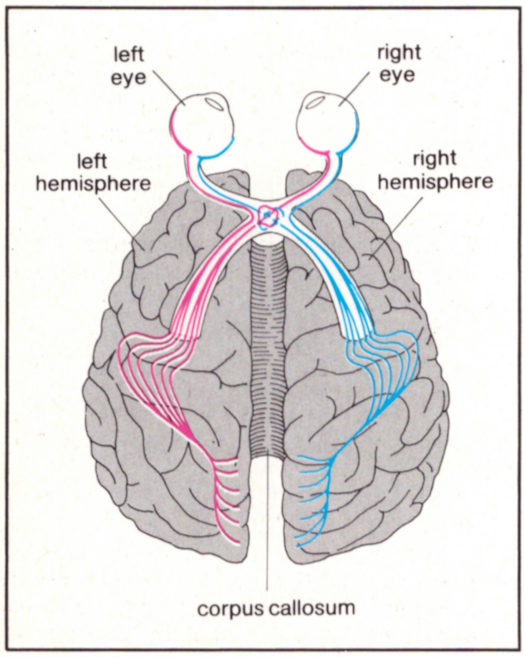
Immanuel Velikovsky, *Worlds in collision*, Sphere 1972



Left: Buddha teaches his disciples. The teachings of many Eastern religions have an essentially non-intellectual character highly at odds with the analytical approach prevalent in the West. But modern neurological research has found that we all possess two brains – one intuitive and non-intellectual, the other rational and analytical. At what cost has the West suppressed the intuitive brain – or the East the rational?

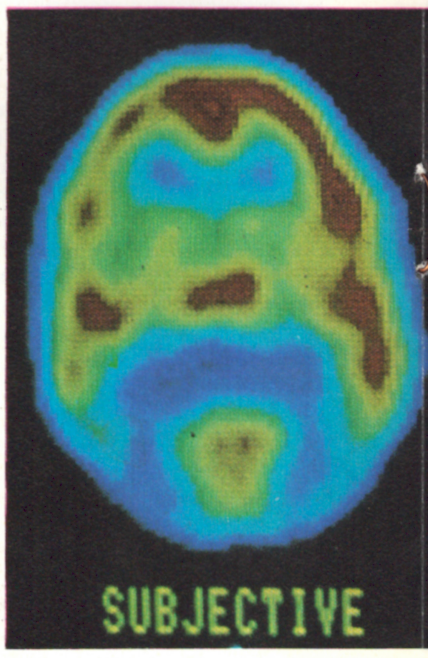
In two minds

Science has revealed that the human brain is split in two – that, quite literally, we all have two independent brains. BRIAN BAXTER describes the different roles of our two minds – and explores the far-reaching implications of this extraordinary discovery



ONE OF THE GREATEST ACHIEVEMENTS of the famous French mathematician Henri Poincaré (1854–1912) was the resolution of a difficult mathematical problem concerning what he called 'Fuchsian functions'. He says in his memoirs that he studied the problem diligently and logically for some time but failed to get a suitable answer. In the midst of intensive mathematical work on the problem, he took a short break to go on a geological excursion, where the excitement of the travel made him forget all about mathematics. So, with his mind full of geology rather than Fuchsian functions, he waited for the bus that was to take him on a field visit. The bus arrived – and suddenly, as he boarded it, the solution to his problem came to him in a kind of intuitive, unthinking flash. He was so confident that he had got the right answer that he did not bother to verify his intuitive insight until he had returned from the excursion. His insight, which turned out to be absolutely correct, had succeeded where logic had failed.

There are many instances in history of 'flashes of insight' – many of them occurring in dreams (see page 548) – suddenly providing a person who is worrying over some problem or other with the correct solution. What is especially interesting is that these insights often occur when the person concerned is not *consciously* thinking about the problem. It is as if, by 'letting go' and



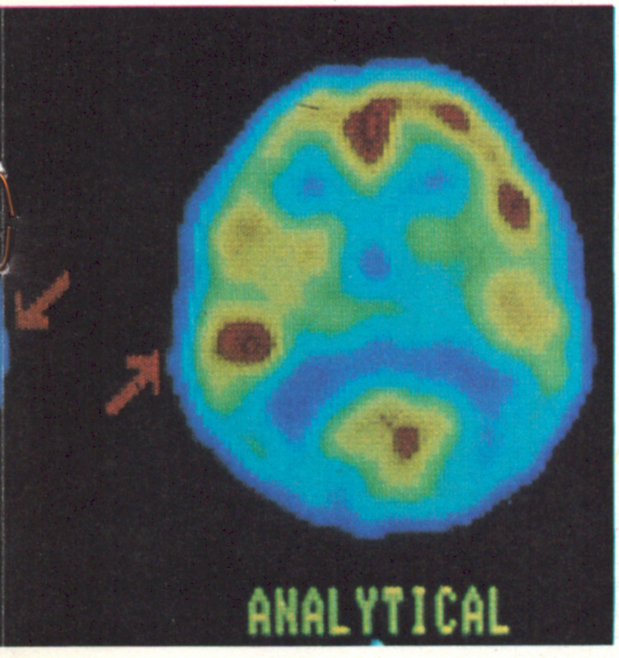
Mysterious powers that lie hidden in our right brain may prove to be the origin of a whole range of experiences that defy rational explanation. Among them are the abilities that we call psychic – for there are indications that psychic activity is left-brain activity.

Water diviners, for instance, often dowse in a relaxed, almost trance-like state in which the left brain does not assert its dominance and the right brain can act freely. It is possible that the right brain recognises the presence of water and causes the arm muscles to contract involuntarily, making the dowsing rod move. The involvement of the right brain in psychic abilities may explain, too, why phenomena like metal bending, telepathy and clairvoyance are so notoriously difficult to reproduce in the laboratory: the scientific environment of the laboratory may repress psychic abilities by accentuating the dominance of the left brain at the expense of the right brain.

There is another startling possibility. Perhaps telepathy – apparently an elusive ability that surfaces only fitfully – is actually simply the way our right brains speak to each other. To restore the balance between left and right brains might be to restore an ability latent in everyone to communicate by telepathy.

Sinister purposes

An 18th-century water diviner (left) and the subject of a Ganzfeld telepathy test at the University of Cambridge (above). Are both dowsing and telepathy controlled by the right brain?



Far left: a section through the human brain. The brain is made up of two distinct halves linked by a 'bridge' of around 200 million nerve fibres called the *corpus callosum*. The left hemisphere controls most of the right-hand side of the body, while the right hemisphere controls most of the left-hand side. The two hemispheres have different cognitive functions: broadly, the analytical functions occur in the 'left brain' while the intuitive functions occur in the 'right brain'. These brain scans (left) were taken while the subject was listening to music. In the scan on the left he is reacting intuitively and subjectively – and the neural activity is predominantly in the right brain. In the scan on the right he is listening more analytically – and the main neural activity has shifted to the left hemisphere of the brain

allowing itself to wander away from strictly logical thinking, the brain can provide the answers through intuitive insight.

Does Poincaré's experience, and others like it, mean that the brain can work in two distinct ways – either under our conscious control, thinking logically in a systematic, step-by-step way, or intuitively, without our conscious control?

The answer, according to a growing number of physiologists and psychologists, appears to be 'yes'. That is, our brain does seem to operate both logically and intuitively – and will oscillate between these two distinct forms of behaviour according to circumstances.

Work carried out by anatomists and neurophysiologists, who study the brain and its functions, supports these bold claims. Anatomically, we know that the human body is roughly *bilaterally symmetrical*. It is possible to draw an imaginary line through the middle of a person bisecting the nose and ending between the feet and, with a few rather important exceptions – such as the heart – the right side of the body is a mirror image of the left. On a general anatomical level, this holds true for the brain. Looked at from above, the brain is made up of two cerebral hemispheres. Joining these two hemispheres is a bridge of about 200 million

nerve fibres called the *corpus callosum*. This structure is one of several *commissures* or bundles of nerve fibres linking equivalent centres on the two sides of the brain. Now, although each hemisphere of the brain appears to be the approximate mirror image of the other, this is not the case: when the hemispheres are examined more closely, profound differences emerge between the functions of the left and right sides.

There are, of course, other instances of seemingly symmetrical parts of our body that, although they mirror each other anatomically, are actually rather different functionally. The most obvious example is our hands: 90 per cent of people write using their right hand. Right-handed individuals are termed 'right-hand dominant'. In these people, the left hand is termed the 'minor' hand. The 10 per cent of people who write with their left hand are thus called 'left-hand dominant'.

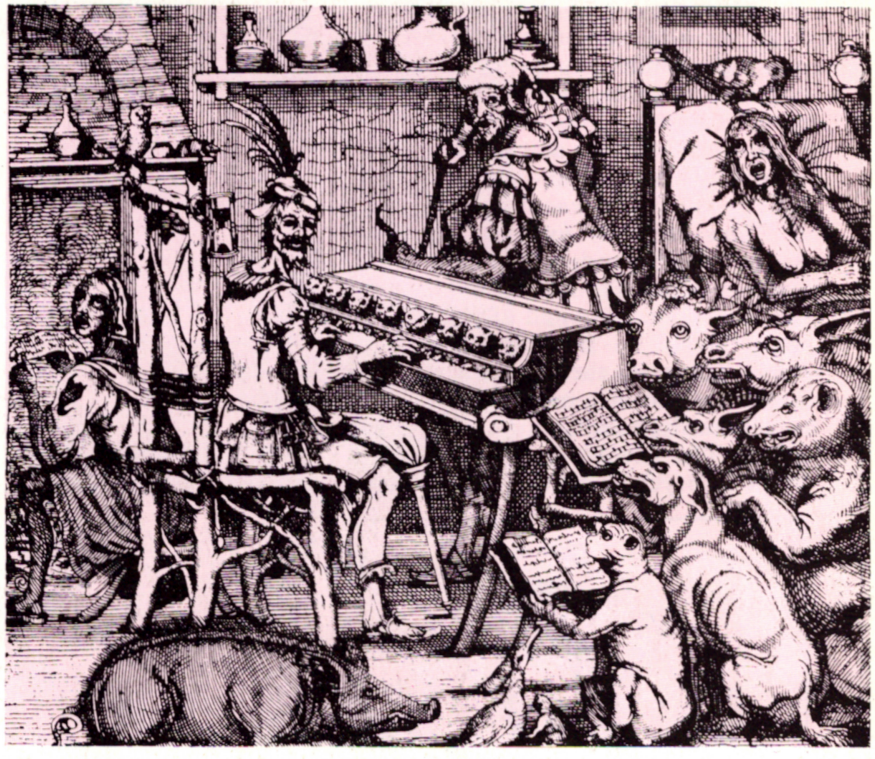
The two hemispheres of the brain also show this 'dominant-minor' distinction, but in this case the *left* side of the brain is usually the dominant side (for 96 to 98 per cent of the population) with the right hemisphere taking the 'minor' role.

It may seem curious at first that, although the *left* hemisphere of the brain is dominant, it is the *right* hand, in most people, that is dominant. But there is a straightforward anatomical explanation: in the hind-brain (the rearmost part of the brain, continuous with the upper end of the spinal cord) many bundles of nerve fibres 'decussate' – cross over – from right to left, and vice versa. This decussation of fibres is responsible for the fact that the left side of the brain generally controls the right side of the body, and vice versa. So the dominant left hemisphere of the brain controls the dominant right hand.

The roots of dexterity

But what does it mean to say that the left hemisphere of the brain is dominant? Dominance in a hand is quite clear. It is stronger, more dextrous – the word itself comes from the Latin *dexter*, meaning the right side – and, for most people, the hand they write with. The brain, however, encased in its hard skull, is much more of an enigma. Perhaps not surprisingly, it was not until 1844 that it was proposed – by A. L. Wigan, in his book *The duality of mind* – that the fact that the brain has two hemispheres might mean that people have two separate minds. This idea – which was then extremely controversial – was suggested to Wigan by a post-mortem examination he carried out on a man with no history of mental illness, whose brain turned out to have only one hemisphere. The fact that half his brain was missing had apparently had no noticeable effect during his life.

This was the first recorded instance of extreme one-hemisphere dominance. Although more recent anatomical evidence has been less dramatic, neurophysiologists probing the brain have found many examples in which one hemisphere dominates the other in specific ranges of functions.



Above: a 17th-century engraving showing magicians in concert. Western society regards magic as *sinister* – from the Latin for left-sided – perhaps because it apparently has no rational foundation

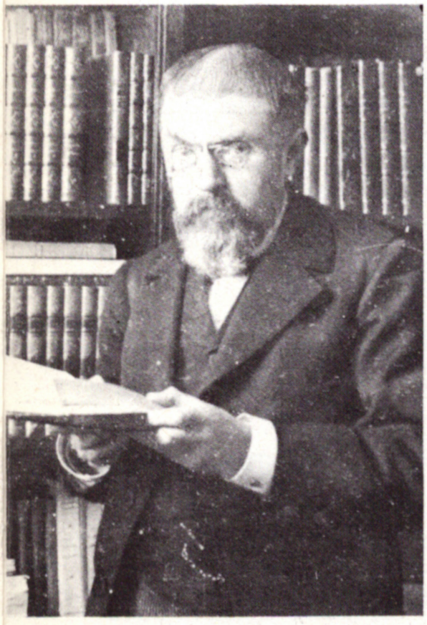
One important method of examining the functions of the two sides of the brain is 'split-brain' research. Splitting the brain means carrying out a commissurotomy – that is, cutting the corpus callosum which, as we have seen, is a thick bundle of nerve fibres connecting the two halves of the brain. Originally, this rather drastic-sounding treatment was carried out, in the early 1960s, by Joseph Bogen of California to ease the pain of sufferers of extreme fits of epilepsy. By cutting the corpus callosum and the anterior commissure, another bunch of nerve fibres joining the two hemispheres of the brain, epileptic seizures were kept from spreading from one side to the other. The patients who underwent this surgery stopped having fits and in every respect appeared quite normal.

This fact was a source of puzzlement to neurophysiologists, because they could not understand why this major surgery apparently had no negative effects on the patients. Perhaps A. L. Wigan was right: perhaps after all, humans did have two separate minds, and cutting the connecting links simply enhanced their independence.

However, it was not until R. W. Sperry and his colleagues at the California Institute of Technology started studying 'split-brain' effects in cats and monkeys and then extended their research to 'split-brain' humans that some curious anomalies in behaviour emerged. Sperry and his fellow researchers had reasoned that cutting the human corpus callosum meant that the speech and writing

Below: the sacred boat of the Egyptian goddess Isis sails through the night. Processions in honour of Isis were led by priests bearing the image of a left hand

Right: a portrait by Jaco Bar of Fra Luca Pacioli, one of the great Renaissance geometers. In the Western tradition, the analytical has always been favoured at the expense of the intuitive. But intuition sometimes plays a part in the most analytical thought processes. The famous 19th-century French mathematician Henri Poincaré (below) made an important mathematical discovery apparently almost by accident: it came to him in a flash of intuition while he was not consciously using his left brain to think of the problem



areas located in the dominant left hemisphere were no longer in contact with the right hemisphere that controlled the left side of the body. Therefore, they argued, if an object were presented in the left-hand side of the field of vision (which was perceived by the right hemisphere of the subject's brain) the 'split-brain' patients would be able to see the object, but neither explain what it was, nor write about it – these functions being a left-brain activity.

Sperry and his team set up a series of simple experiments to explore these ideas. In one such experiment a split-brain patient sat on one side of a screen. Behind the screen, out of his view, was a collection of small, simple objects such as a hammer, a knife, a nut, a bolt, and so on. The name of one object was flashed for one tenth of a second onto the screen in such a way that it was recognised only by the right hemisphere. When the patient was asked to name the object he failed, but if he felt behind the screen with his *left* hand, he selected the correct object.

Many other experiments on this theme have been carried out, together with investigations of brain activity using electroencephalographs to compare the neural activity in the two hemispheres when the subject is carrying out a number of varied tasks.

The left brain controls speech, writing and numerical abilities; its mode of thought is analytical, logical, and rational; it proceeds by rigorous step-by-step analysis of the problems it is set. The right hemisphere, on the other hand, controls the ability to visualise in three dimensions, 'sense of direction' and musical ability; it is perceptual, intuitive, methaphorical, imaginative, and discerns things as wholes or in terms of patterns rather than analysing them logically in the manner of the left hemisphere.

The reason why, for most people, the left hemisphere of the brain appears to be dominant is that its abilities in the verbal, analytical and logical areas are those that are the most highly regarded in Western culture.

The mathematician is trained so that his left-brain functions are developed to a high degree, whereas the value of his right brain can go unnoticed until the left brain relaxes its hold over the thought processes. Poincaré's insights came to him in a flash – demonstrating that the processes of his right brain were largely unconscious.

There are the artists, sculptors, mystics and people who 'drop out' of the system and counter this left-brain domination by trying to assert the value of right-brain activity – but they still remain, in general, a barely tolerated minority on the fringes of our society. Nonetheless, their presence may indicate that they are the vanguard of a new form of consciousness – a consciousness that embraces both right-brain and left-brain thought and behaviour.

This new form of consciousness will have a difficult struggle if it is to counter the powerful forces that favour left-brain dominance. Bearing in mind that the *left* brain controls the *right* side of the body we would

Above: a medieval wall painting from St Thomas's church, Salisbury, England, showing the Last Judgement. The souls who are to go to heaven are sitting at God's right hand; those who are doomed to perdition are on his left

expect that, under the regime of the old consciousness, *right*-sidedness would be favoured, while the *left* side would have a flavour of disrepute about it.

The evidence confirms this: for instance the Bible (Matthew 25:33) indicates that God 'shall set the sheep on his right hand, but the goats on his left'. The goats are not only placed on the left: they are ultimately destined to be thrown to the Devil.

Light and dark

In the Greek tradition of Pythagoras – a patriarchal tradition – the right side was associated with the light and the Sun, the straight, the good and the male, whereas, the left corresponded to the dark and the Moon, the crooked, the evil and the female. And in ancient Egypt – a matriarchal society – the Isis cult honoured the female Isis rather than the male Osiris; night was revered rather than day, and the Isis processions were led by priests holding an image of the left hand.

Western society, with its patriarchal, male-dominated view of the world, inherited from the Greeks, has suppressed the matriarchal view of the Egyptians – and there seems little alternative but to conclude that this is because a rival order constitutes a threat to the dominance of the right side.

It is perhaps significant that Western society sees as *sinister* – from the Latin for left-sided – such activities as magic and mysticism, because there appears to be no rational logic behind them. But activities such as transcendental meditation, yoga, faith healing, parapsychology, divining and achieving altered states of consciousness through the use of drugs all defy left-brain logic, yet are practised by large numbers of people. The growth in the pursuit of these 'sinister' activities has arisen, it seems, because increasing numbers of people are rebelling against the alienation, depersonalisation and rationalisation imposed by Western technological existence, and are seeking to let their right brains come alive, thereby restoring the balance between left and right brains. The right brain can be seen to be reasserting itself in all aspects of life, ranging from the increasing willingness to take paranormal occurrences seriously to the interest in Zen and other Eastern mystical 'religions'.

If this rebellion by the right brain is to generate a new consciousness of life, it is important to keep a sense of perspective. What is necessary is not left- or right-brain *dominance*, but harmony between the two hemispheres of the brain. This harmony can arise only through an open dialogue between the halves of the brain, each contributing its own strengths and abilities. To this end, we may be able to train ourselves to use our right brains more consciously through, for example, biofeedback (see page 980), giving time – from school age onwards – to 'right-brain' activities and training ourselves to realise when to 'let go' or forget a problem so that the right brain can help to resolve it. We may also be able to learn from the Chinese, who have long held the view that all existence is represented by the integration of opposites called *yin*, the female principle, and *yang*, the male principle – opposites that also, broadly, delineate the contrast between the right and left brains. The philosophers of ancient China, it seems, were wiser than we are: they knew – centuries before Western neurophysiologists began to discover the same truth – that without this active union of opposites we are but half-brained.

Right: a Tarot card designed for Aleister Crowley by Frieda Harris, with the interlocking symbols of *yin* and *yang* – the female and male principles, whose integration represents the whole of existence. *Yin* and *yang* also broadly delineate the characteristics of the right and left brains. Some psychologists believe that only with the restoration of the balance between left and right brain will balanced mentality emerge

The scoop that never was

The newspaper's front page story was a dream in more ways than one: the first report in print of the greatest volcanic eruption in history – and the news had come to an editor in his sleep. Now MELVIN HARRIS compares this striking case of ESP with the historical record

ON 29 AUGUST 1883 an incredible prophetic dream came to Edward Samson, a night news editor of the *Boston Globe*. At 3 a.m. he woke from an uneasy sleep. He felt cramped and his head was pounding like a steam hammer – which was understandable, for he had been sleeping on a rickety couch in the newspaper office, and had drunk far too much the night before. But the worst thing about his sleep had been a vivid nightmare.

In it Samson had witnessed a gigantic volcanic eruption on an island near Java. Streams of molten lava had swept over villages. Terrified natives had been burnt to death. Ships had been overturned and sunk by huge waves. Then the island itself had been blown off the face of the Earth.

This dream was so vivid in detail that Samson, instantly he awoke, struggled to his desk and wrote down a complete account of it. At the time he did not consider it a premonition but simply thought that one day it might be worked up into a short story. After that, he tottered off home, leaving the story on his desk.

When the day news editor came in at 8 a.m. he spotted Samson's story and mistook it for an authentic news item, imagining that it had come in late over the telegraph machine. The story so impressed him that he rushed it down to the printers with instructions to run it as a front-page story. Then he passed the story to the Associated Press wire service and they, in turn, sent it out all over the United States.

The *Globe*'s account appeared under banner headlines and the editor congratulated himself on such a dramatic scoop – but he soon lost his smug smile. His office was suddenly hit by a flood of frantic enquiries from other newspapers demanding more details of the 'catastrophe'. And some of them even cast doubts on the report.

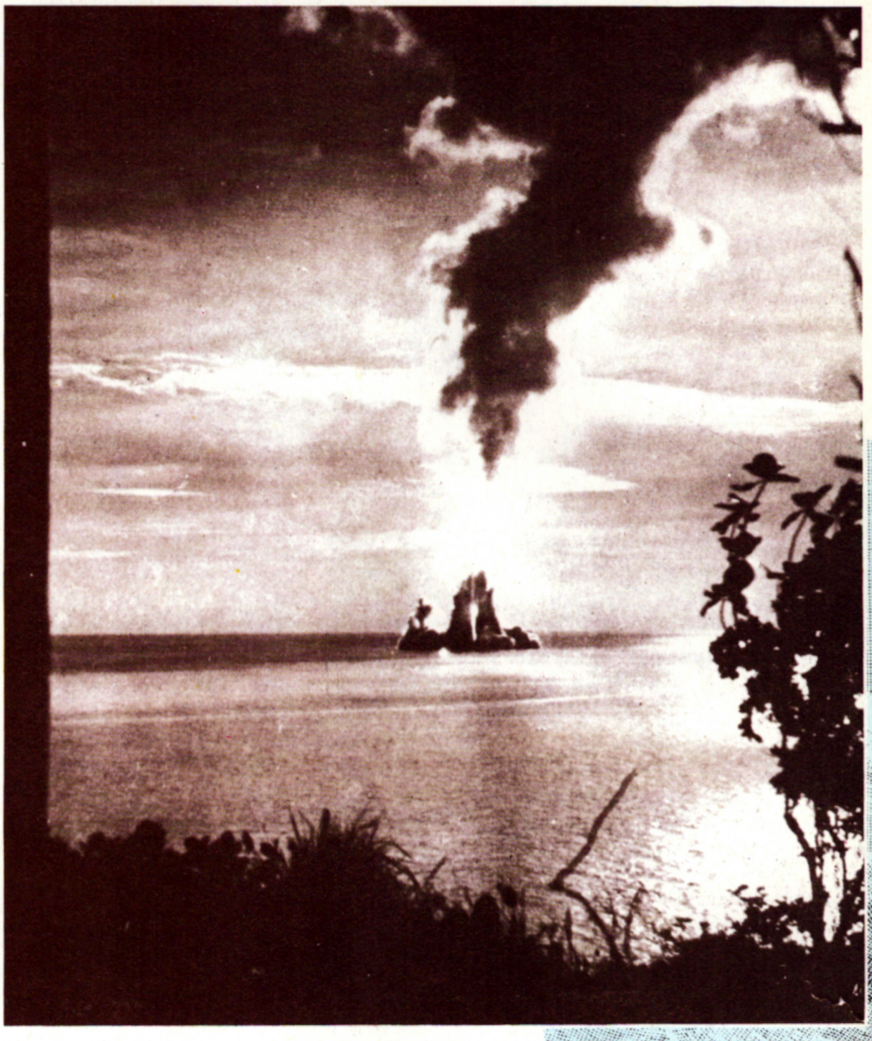
Unfortunately, there were no cable lines or other means with which to make fast contact with Java, and Samson was nowhere to be found – presumably he was nursing his hangover. So the *Globe* office stayed confused until the evening, when they finally caught up with Samson.

He sheepishly confessed that the 'news story' was nothing but a drunken dream –

One of the islands that now mark the spot where Krakatoa blew up in August 1883. The violence of the explosion shook houses in Jakarta, 100 miles (160 kilometres) away, and the sound was heard 3000 miles (4800 kilometres) to the south-west. Did psychic 'shock waves' travel even farther, to the mind of Edward Samson, sleeping in his newspaper office in Boston, USA?

and he was promptly sacked. Yet before the *Globe* could withdraw the story and apologise to its readers, it gained a reprieve. In came a batch of reports from the West Coast describing unusually high waves pounding the beaches. And then cables came in from other localities telling of tidal waves overturning ships and sweeping over islands. Gradually it became obvious that some natural calamity had indeed taken place.

Within a few days battered ships pulled into ports with the incredible story; the whole world knew for certain that the island of Krakatoa had been blown to pieces by its volcano. At once, Samson became the *Globe*'s hero, for this was obviously the island near Java about which he had dreamed. Moreover, the destruction had, apparently, happened at the very time of his dream. Samson's description had given an accurate picture of the events, just as they had unfolded. But there was one odd discrepancy, for Samson had called his dream island 'Pralape', not Krakatoa. There was no island of that name near Java – or anywhere else. Apart from that, his story was exact in all other details. Yet oddly enough, even this 'mistake' involving the island's name turned out to be uncannily right; for it was later discovered that Pralape was, in fact, the name the natives had used for Krakatoa some 150 years earlier.



The approach of disaster

That, then, is the traditional story of a dream that made history, a story that has been repeated often – both in print and on the air. On the surface it seems impossible to fault in any way, especially since the proof is said to be there on the front page of the *Boston Globe*. But things are not always as they seem.

Krakatoa did not erupt suddenly, without warning. The first rumblings from the volcano began as early as May 1883 and the noise was heard over 100 miles (160 kilometres) away. Throughout the summer the volcano became more and more violent. The dust from its eruptions made the sky dark for miles around, and tourists flocked to watch. By July the volcanic activity was fierce enough to show that a major disaster was brewing. Then in August the violence grew greater every day. By the middle of the month there was widespread panic in the area, and on Sunday, 26 August the people of distant Batavia (now Jakarta) were kept awake all night by the thunderous noise. The final act came at 10 a.m. on Monday, 27 August, when the greatest convulsion since prehistoric times took place. Krakatoa was blown to smithereens.

So the truth is that many thousands, if not millions, of people knew that a major disaster was probable. Of these, the newspaper fraternity were better informed than most. So if Samson had dreamed of this disaster it would hardly have been prophetic in any way. He would simply have been creating a fantasy around facts he knew already.

However, research indicates that Samson did nothing of the sort. Indeed, the whole story collapses the minute it is investigated, for it turns out that none of the people who have marvelled at this 'prophecy' have ever bothered to look at the files of the *Boston Globe*.

The *Globe*'s front page story on Wednesday, 29 August 1883 is certainly a dramatic account, but it is in no way a dream fantasy. It was based on a cabled item dispatched from London, compiled and sent out at 10.30 p.m. the day *before* – which means that it was in the *Globe*'s office hours before Samson's alleged dream. The *Globe* then followed up the story on 30 and 31 August, but each time their only source was a cable sent from London. As for the mystery name of 'Pralape' – this simply does not appear. In fact, the fifth line of the story clearly names Krakatoa. After this it is not too surprising to find that the *Globe* never even had an editor called Edward Samson. The man responsible for the Krakatoa coverage was the day editor, Byron Somes. So how did this extraordinary story come into being?

It all stems from an item included in Florence Finch Kelly's reminiscences *Flowering*

stream. Florence Kelly had worked for the *Boston Globe*, but when she wrote her memoirs, some 55 years after that time, her memory was hazy and at times blatantly haywire. This led her to spin a yarn about young Somes needing money for a trip to Washington; in order to get the funds he concocted a hoax story about a volcanic eruption and sold it to the paper. He struck lucky when a real eruption happened to coincide with his printed account – and he inadvertently became a hero.

All this fantasy was based on the tiniest grain of truth. At the time of the Krakatoa eruption the *Globe* was in dispute with the Associated Press wire service, and had no access to detailed reports from London. Somes did not wish to be outshone by other newspapers, so, unable to gain access to direct telegraph reports, he took the skeleton story that had come by telegraph from London and decided to flesh it out.

He went to the public library, unearthed everything they had on volcanic eruptions in the Java area and used the information to draw an accurate pen-picture of what it *would be like* in the Sunda Straits, where Krakatoa was situated, at the crucial hours. He so soaked himself in the geography and volcanic history of the area that his stories proved to be amazingly accurate. And Somes sometimes amused himself by replying to congratulations on his 'scoop' by joking, 'Well, I simply dreamt it all up.' This slender quip was taken literally by Mrs Kelly, thus sparking off the whole fantastic tale of a clairvoyant dream.

In later years, an influential American broadcaster, the late Frank Edwards, told 'the editor's dream' story often – with his own embellishments; and it was in his version that the editor's name became 'Edward Samson'. Today, the two versions often run in rival publications.

Left: Krakatoa in the course of its protracted eruption. The plume of smoke, dust and steam rose high into the stratosphere; airborne dust brought darkness to some places for days, and spectacular sunsets around the world for a year

Below left: a sea of bodies – the aftermath of the Krakatoa explosion. About 100,000 people died as a result of the eruption, mostly in the tidal waves that swept the coasts of the Indonesian islands

Below: the *Boston Globe*'s first report of the disaster gives the lie to the legend that the account was dreamed by an editor. The story was based on cables from London, though some imagination went into it. Only in this sense was the story 'dreamed up'

VOL. XXIV.—NO. 59. BOS

JAVA DESOLATED.

Terrible Destruction by Lava and Water.

Thousands of the Inhabitants Lose Their Lives.

Volcanic Eruptions Shake Up Both Land and Sea.

Entire Cities Swept Away Almost in an Instant.

Death and Desolation Succeed Life and Prosperity.

Special by Cable to The Boston Globe.]

LONDON, August 28—10.30 P. M.

The latest advices from Batavia, the capital of Java, show that the volcanic eruptions in that island are much more serious than at first stated. The disturbances began in the Krakatoa, in the

pecuniary loss. The exchange and the military hospital suffered great damage.

At Anjer the European and American quarter was first overwhelmed by rocks, mud and lava from the craters, and then the waters came up and swallowed the ruins, leaving

Nothing to Mark the Site.

and causing the loss of somewhere in the neighborhood of 2000 lives of the inhabitants and those who had tried to find a refuge there.

Bantam, once a prosperous and flourishing native city, but practically abandoned many years ago, was entirely covered several times by the waters, and there must have been from 1200 to 1500 people drowned.

The island of Serang, just off the coast, was completely inundated, and not a soul remains to tell the tale of disaster and death.

At Cheribon there was no great flood of waters, but the loss of life and property by the falling of rocks and the flow of lava must have been very considerable.

Buitenzorg suffered very seriously, as did Samarang, Jokjokerta, Surakerta and Surabaya, while the meagre reports from the lesser towns indicate that their loss was as great in proportion.

The "thousand temples" at Brambanan were very much damaged and some of them totally destroyed. Some of the domes of the noted temple of Borobodo were crushed in by huge falling rocks.

While there can be no accurate estimate formed at present of the loss of life, it must be apparent, when it is considered that the island has a population of over 10,000,000 people, that the death list will foot far up into the thousands.

At the last advices the eruptions were still continuing, although their violence had abated somewhat, and it is feared that the end of the disaster will show it to have been one of the most frightful ever known in the history of volcanic eruptions.

SEEKING ETERNITY.

Prisoner Vinal's Unsuccessful Attempt to Hang Himself.

[Special Despatch to The Boston Globe.]

HINGHAM, August 28.—Samuel C. Vinal of the

Faces from another world?

Portraits that appeared mysteriously in the floor of a Spanish kitchen seemed to change and decay over a period of time – attracting thousands of sightseers and baffling psychical investigators. ELMAR GRUBER **reports**

ON THE MORNING of 23 August 1971 a housewife in the little Spanish village of Bélmez de la Moraleda went into her kitchen and was startled to find the likeness of a face apparently painted on the floor. It was not an apparition, nor was it an hallucination; the housewife – a simple peasant woman named Maria Gómez Pereira – could only assume that a paranormal phenomenon had taken place in her home. The news spread quickly, and soon everyone in the village had heard about the strange happening and flocked to the house in Rodriguez Acosta Street to examine the face. It looked like a portrait in the expressionist style painted on the floor – but no one had painted it there. The features seemed to emerge naturally from the blend of colours in the floor cement.

The Pereira family tried to play down this extraordinary event that threatened to destroy their normally quiet everyday existence. They decided to destroy the 'painting': six days after the appearance of the face the Pereiras' son, Miguel, hacked up the kitchen floor and relaid it with fresh cement.

Nothing more happened for a week. Then, on 8 September, Maria Pereira again entered her kitchen to find a strange likeness of a human face apparently in the process of manifesting itself in the concrete of the floor, in exactly the same place as the first one. This time the delineation of a male face was even clearer.

It was impossible now to keep the crowds of curious spectators at bay. Every day hordes of people queued outside the house in order to look at the 'face from another world'. The face remained on the floor for several weeks: although it did not disappear, the features started to change slowly, as if the face were ageing or undergoing some other degenerative process.

Recognising the importance of the faces, the mayor of Bélmez decided that the second one should not be destroyed, but preserved rather like a valuable work of art. On 2 November 1971 a large crowd watched while the face was cut out of the ground, mounted behind glass and hung on the wall beside the fireplace. By this time the story of the second Bélmez face had spread far beyond the village, and photographs of it had appeared in the local press.

The floor of the kitchen was then dug up to discover if there was anything buried there that might explain the appearance of the faces. At a depth of about 9 feet (2.7 metres) the diggers found a number of human bones. This discovery satisfied the Spiritists interested in the Bélmez faces, since Spiritists believe that a restless spirit may haunt the place where its body is buried, or produce poltergeist phenomena there. But to the residents of Bélmez the discovery of the bones was not in the least surprising, since it was well-known that most of the houses in Rodriguez Acosta Street were built on the site of a former graveyard.

The face that had been put behind glass was scrutinised by an art expert, Professor Camón Aznar, who expressed surprise at the

Doña Maria Gómez Pereira (below) at the door of her house in Rodriguez Acosta Street in Bélmez. When news spread of the paranormal portraits painted on Doña Pereira's kitchen floor, a crowd of spectators became a permanent feature outside the house (right, at the far end of the street). The family's life was so disrupted by the constant stream of visitors that they destroyed the first portrait

Psychical researchers photographing the second face, after it had been cut out of the floor and mounted on the wall. Over a period of several months the expression on the face changed from awe to irony, and the delicate lines of the features started to degenerate. Witnesses were also able to watch other faces 'growing' in the floor, starting as very crude lines and evolving into intricately drawn portraits

subtlety of the 'painting's' execution. He described it as the portrait of a startled, or astonished, man with slightly open lips. During the ensuing weeks the lines of the face started to decay, and the expression changed to one of irony.

Two weeks after the kitchen floor had been excavated, and then replaced, a third face appeared very near the spot where the first two were discovered; and two weeks after this, yet a fourth face appeared, the first to have female features. After examining these two latest faces, Professor Aznar expressed the opinion that they were examples of paintings in true expressionist style. Other observers, such as the painter Fernando Calderón and the parapsychologist Germán de Argumosa, considered them masterpieces of art produced paranormally.

Face in a crowd

Around the fourth face a quantity of smaller faces began to appear; Maria Pereira counted nine of them, while Professor Argumosa, who had taken up the case enthusiastically and become its principal investigator, was able to count 18.

At an international conference of parapsychology in Barcelona in 1977, Argumosa told the author that he inclined to the view that the faces were the result of some poltergeist-like activity produced by unquiet spirits. Although his ideas were not very clearly formulated, he admitted to being 'most surprised when I was able to witness the formation of some of the faces from very crude lines to meticulously drawn portraits'.

On 9 April 1972 Argumosa watched the formation of one face over a protracted period of time. Other witnesses present were the journalists Rafael Alcalá from the newspaper *Jaén* and Pedro Sagrario from *Patria*. It was incredible, Argumosa wrote afterwards, 'how the face slowly assumed contours before our astonished eyes . . . . I must admit my heart was beating faster than usual.' Pedro Sagrario also described what he had seen: the gradual appearance on the brick-built part of the floor of seemingly unconnected lines, which eventually composed themselves into an impressive and attractive 'painting' of a face. This face was photographed several times; it had virtually disappeared again by the end of the day.

Eventually Argumosa invited his fellow parapyschologist Professor Hans Bender, of the Freiburg Institute in Germany, to help with the investigations. Professor Bender arrived in Bélmez in May 1972 to be met by a chaotic situation. Many people, including priests, painters, parapsychologists and journalists, had witnessed the phenomena, and everyone had a different theory as to what was causing them.

After interviewing many of the local witnesses, Bender was convinced that the faces were genuinely paranormal in origin. However, Bender noted another dimension to the faces: that they seemed to be perceived differently by different witnesses. The same face would appear to be that of a young man to one witness, and that of an old man to another. Some of the faces seemed to be constructed like a jig-saw puzzle, or to 'interlock' with other, larger faces. This quality of one line being perceived in different ways is also often observed in the work of mediumistic artists.

Attempts had been made to clean the faces off the floor with detergents, and by scrubbing. But the faces persisted, evolving and decaying in accordance with some strange law of their own.

In an attempt to document the production

of the faces under experimental conditions, Bender carried out a procedure that Argumosa had already tried without success. He and his team of investigators first photographed the kitchen floor, and then covered it entirely with thick plastic sheeting. The sheeting extended right up to the walls, and was secured at 6-inch (15-centimetre) intervals. The original plan of installing a camera to record the paranormal formation of faces proved impracticable as the light in the room was too dim for filming, and additional lighting produced too many reflections on the plastic sheeting.

This method was intended to ensure that any faces that appeared had not been produced by any outside agency. Unfortunately water started to accumulate beneath the plastic, and the Pereiras decided to remove it before any faces became apparent.

Although Argumosa and Bender paid several visits to Bélmez during the next few months their investigations produced no conclusive results. But the 'haunted house' had become a place of pilgrimage for those interested in the occult, and people came from Spain, France, England and Germany to look at the faces, which they interpreted variously as demonic or sacred. They also brought tape recorders to record sessions with the 'spirits' they expected to find lingering in the house. Quite a number of unusual recordings were obtained, including one made by Argumosa himself. On this can be heard loud cries, the sound of many voices talking all at once, and the sound of people crying. The author was present when this tape was played in the Barcelona home of the psychical researcher Mrs Carole Ramis, and it certainly had an impressively eerie quality. Mrs Ramis was of the opinion that something very bad must have happened centuries ago at the house in Bélmez – perhaps connected with the graveyard beneath.

But no rational explanation for the faces has yet been given; chemists who examined the cement were quite unable to account for the appearance of the phenomena. In 1982 it was reported in the press that the faces had started to appear again, and in early 1983 eyewitnesses told the author in person that the unearthly artists were indeed at work again on the psychic floor in Spain.

The author photographed the second Bélmez face on two occasions more than six months apart. On 10 September 1971 (above) the features were quite clear; by 10 April 1972 (right) they were starting to decay. Other portraits in the floor appeared, evolved, disintegrated and disappeared within one day – and bore expressions that were differently interpreted by different people. Both scientists and parapsychologists were baffled by the phenomena

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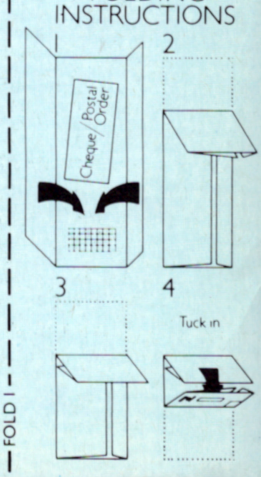

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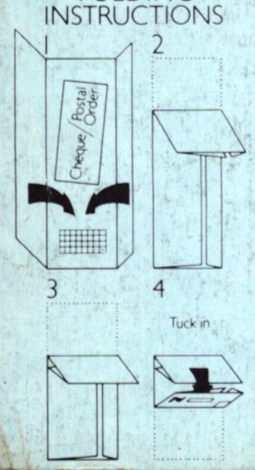

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